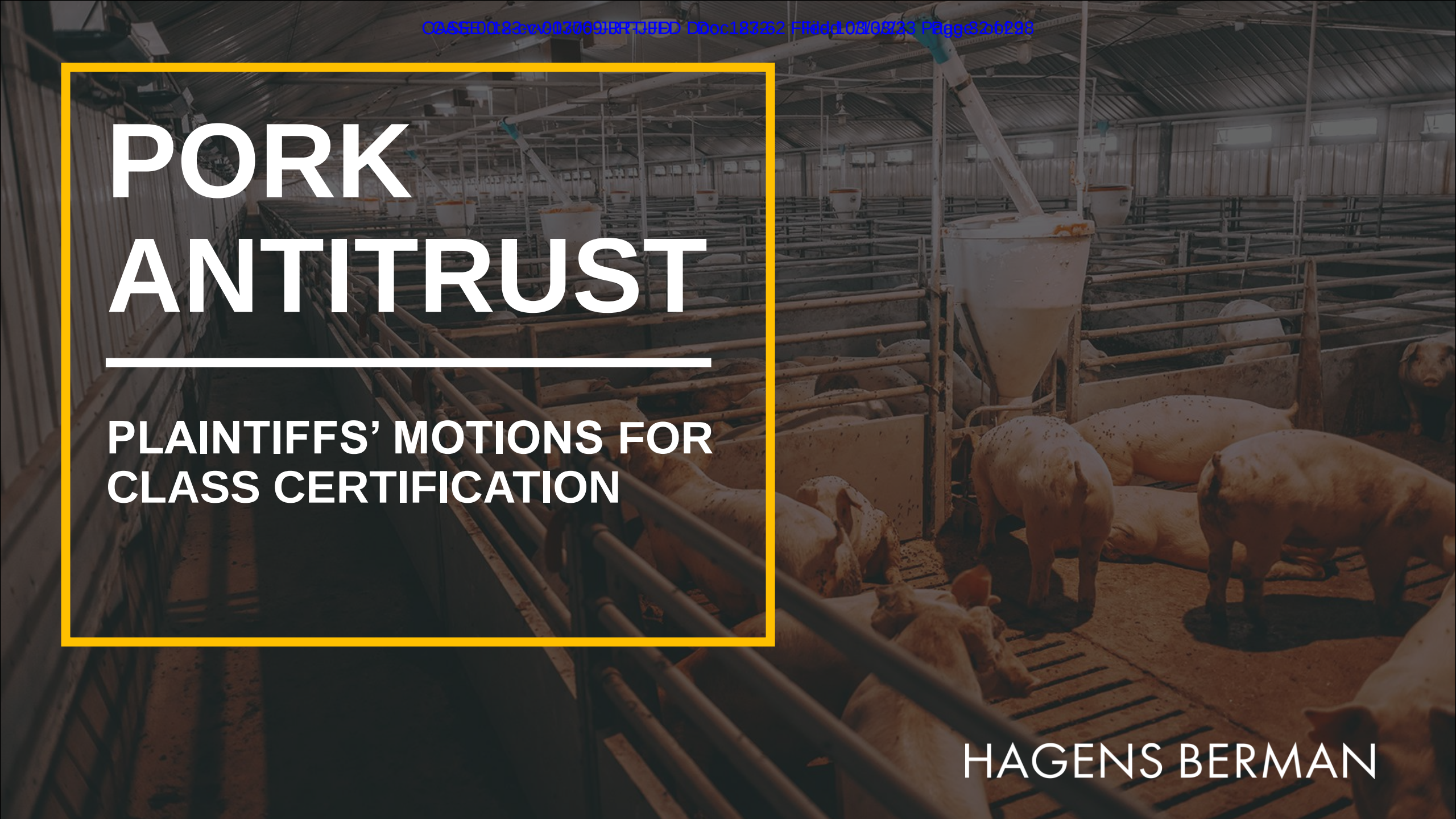
EXHIBIT 6

ATTACHMENT 2

PORK ANTITRUST

PLAINTIFFS' MOTIONS FOR CLASS CERTIFICATION



HAGENS BERMAN

PART I

COMMON IMPACT

CONSUMER INDIRECT PURCHASER PLAINTIFFS | HAGENS BERMAN

Method One of Showing Common Impact: **Multivariate Regression Models**

Arrived at separately, all experts point in the same direction.

Regression Specifications	Dr. Singer		Dr. Mangum		Dr. Williams	
	Pooled	Separate	Pooled	Separate	Pooled	Separate
Model Type	Yes	Yes	No	Yes	Yes	Yes
Conduct Overcharge	12.0%	4.8% - 27.6%	--	4.3% - 19.1%	10.3%	8.1% - 27.0%
Benchmark and Class Periods						
Benchmark Period	Apr. 2004 - Dec. 2008		Jan. 2005 - Dec. 2008		Jan. 2005 - Dec. 2008	
Alleged Conduct Period	Jan. 2009 - June 2018		Jan. 2009 - June 2018		Jan. 2009 - June 2018	
Class Period	June 2014 - July 2018		June 2014 - June 2018		June 2014 - June 2018	

Overcharge by Cut			
Pork Cut	**Dr. Singer**	**Dr. Mangum**	**Dr. Williams**
Bacon	16.0%	13.9%	9.3%
Belly	27.6%	19.1%	--
Loin	4.8%	4.3%	8.1%
Ribs	18.7%	8.0%	18.2%
Shoulder	11.1%	11.5%	17.2%
Fresh Ham	--	4.7%	--
Ham	--	--	27.0%

Singer ¶¶ 146, 161; Mangum Report ¶¶ 213, 246, Figure 75; Williams ¶¶ 205, 226, Table 4

Method One of Showing Common Impact: **Multivariate Regression Models**

They control for all other relevant variables that impact pork prices.

Regression Control Variables	Dr. Singer	Dr. Mangum	Dr. Williams	Controls For:	Dr. Haider's Alleged Missing Factors
Competing Proteins	✓	✓	✓	The relative prices of pork substitutes.	"National Economic Shocks"
GDP	✓	✓	✓	Consumer demand, labor productivity, standard of living, national economic shocks.	"National Economic Shocks", "2008 anomalous year", "trade"
Hog cost	✓	✓	✓	Corn, soy, other feed; farm labor, farm capital, interest rates, transportation, fuel, vet costs, etc.	"Cost of acquiring live hogs", "2008 anomalous year", "Circovirus vaccine"
Plant costs	✓	✓	✓	Plant labor, supervision, packaging, plant supplies, maintenance, ice, utilities, depreciation, regulatory costs,	"National Economic Shocks" "2008 anomalous year"
Swine Flu	✓	✓	✓	H1N1 shock in consumer demand.	
Piglet Loss Rate	✓	✓	✓	Piglet morality rates, Circovirus vaccine.	"2008 anomalous year", "Circovirus vaccine"
Seasonality	✓	✓	✓	Seasonal prices on cuts.	
Covid	✓	✓	✓	COVID-19 economy shocks.	
Bacon Ingredient Index	✓	X	✓	Bacon-specific ingredient costs (salt and spices).	
Pork Recalls	✓	X	X	Consumer demand following recalls.	
CPI	X	✓	✓	USD inflation.	
Population	X	X	✓	Long run consumer demand.	
Trend	✓	X	X	Long run trends: (Technology, productivity, export demand, population, inflation.)	
Processor Fixed Effects	✓	✓	✓	Individual Defendant characteristics.	
Product Fixed Effects	✓	✓	✓	Primal cut pricing differences.	
Customer ID Fixed Effects	✓	✓	✓	Individual Direct Purchaser characteristics.	
Customer Type Fixed Effects	✓	X	✓	Direct Purchaser category (distributor, retail, etc.).	

Singer Reply Table ; Mangum Reply ¶ 139; Williams ¶¶ 152-163

Method Two of Showing Common Impact:
Even Accepting Dr. Haider's Criticisms, Classwide Impact Exists

Taking all of Dr. Haider's criticisms of Dr. Singer into account, classwide impact still exists.

	Dr. Singer		Dr. Haider	
	Conclusion	**Detail**	**Conclusion**	**Detail**
Evidence of Market Power?	Yes	SR II	*Not Disputed*	--
Evidence of Collusion?	Yes	SR III	*Not Disputed*	--
Evidence of Overcharge to Direct Purchasers?	Yes	~12% (Table 12)	Yes	0.4%, 2.9%, 4.2% (Exhibits 14 & 22)
Evidence of Impact to All Direct Purchasers?	**Yes**		**Yes**	--
In-Sample Prediction	Yes	Over 99.9% (Table 16)	No	HR VI.E
Evidence of Price Structure	Yes	Table 17	Yes	Exhibit D-34
Direct Purchaser, Product Category, and Defendant Specific Regressions	Yes	Tables 23 - 25	*Not Disputed*	--
Individual Direct Purchaser Regression	--	--	Yes	Over 96% (Exhibit D-13)
Evidence of Passed-Through?	**Yes**		**Yes**	
Theory	Yes	~100% (SR V.C.1)	*Not Disputed*	--
Record Evidence	Yes	~100% (SR V.C.2)	*Not Disputed*	--
Pass-Through Regression	Yes	~100% (SR V.C.1)	Yes	~90-100% (Exhibit 42)
Pricing Strategy Exceptions	Yes	--	No	HR VIII.C
Classwide Impact?	**Yes**		**Yes**	
Evidence and Methods Common?	**Yes**		***Not Disputed***	

Singer Reply Table 1 (SR – Singer Report; HR – Haider Report)

Method Two of Showing Common Impact: **Even Accepting Dr. Haider's Criticisms, Classwide Impact Exists**

Taking all of Dr. Haider's criticisms of Dr. Mangum into account, classwide impact still exists.

	Dr. Mangum		Dr. Haider	
	Conclusion	**Detail**	**Conclusion**	**Detail**
Evidence of Market Power?	Yes	MCR III.A	*Not Disputed*	--
Evidence of Collusion?	Yes	MCR III.A	*Not Disputed*	--
Evidence of Overcharge to Direct Purchasers?	Yes	MCR Figure 75	Yes	HR Exhibit 12
Combined cuts	Yes	9.6% (FN 525)	Yes	6.7%
Bacon	Yes	13.9%	Yes	4.1%
Belly	Yes	19.1%	No	-1.4%
Fresh Ham	Yes	4.7%	Yes	4.9%
Loin	Yes	4.3%	Yes	11.8%
Ribs	Yes	8.0%	Yes	10.6%
Shoulder	Yes	11.5%	Yes	19.7%
Evidence of Impact to All Direct Purchasers?	**Yes**		**Yes**	--
In-Sample Prediction	Yes	Over 99.9% (MCR ¶ 256)	No	HR VI.E
Evidence of Price Structure	Yes	MCR IV.B - D.	No	
Individual Direct Purchaser Regression	--	--	Yes	Over 90% (MRR ¶¶ 124-126)
Evidence and Methods Common?	**Yes**		***Not Disputed***	
VOC and Damages Calculation?	**Yes**	MCR VI.A.	***Not Disputed***	

MCR = Mangum Report; MRR – Mangum Reply Report; HR = Haider Report

Method Two of Showing Common Impact:
Even Accepting Dr. Haider's Criticisms, Classwide Impact Exists

Taking all of Dr. Haider's criticisms of Dr. Williams into account, classwide impact still exists.

	Dr. Williams		Dr. Haider	
	Conclusion	**Detail**	**Conclusion**	**Detail**
Evidence of Market Power?	Yes	WO III.A	*Not Disputed*	--
Evidence of Collusion?	Yes	WO III.B	*Not Disputed*	--
Evidence of Overcharge to Direct Purchasers?	Yes	10.3% (WO Table 4)	Yes	9.7% (WR Table 9)
Evidence of Impact to All Direct Purchasers?	**Yes**		**Yes**	--
In-Sample Prediction	Yes	Over 99.9% (WO ¶ 262)	No	HR VI.E
Evidence of Price Structure	N/A			
Direct Purchaser, Product Category, and Defendant Specific Regressions	Yes	WO Tables 6 - 7	*Not Disputed*	--
Individual Direct Purchaser Regression	--	--	Yes	Over 93% (WR ¶ 174)
Evidence of Pass-Through?	**Yes**		**Yes**	
Theory	Yes	WO IV.C.ii	*Not Disputed*	--
Record Evidence	Yes	WO IV.C.ii	*Not Disputed*	--
Pass-Through Regression	Yes	Foodservice 100.2% Multi-channel 95.5% (WO Table 5)	*Not Disputed*	--
Pricing Strategy Exceptions	N/A		N/A	
Classwide Impact?	**Yes**		**Yes**	
Significance of overcharges	Yes	WO IV.C.i	*Not Disputed*	--
Market structure characteristics	Yes	WO IV.C.iv	*Not Disputed*	--
Evidence and Methods Common?	**Yes**		***Not Disputed***	
VOC and Damages Calculation?	**Yes**	WO V	***Not Disputed***	

W0 = Williams Report; WR = Williams Reply; HR = Haider Report

Method Three of Showing Common Impact: **Direct Purchaser Regressions**

Dr. Haider's own "direct purchaser" regressions show widespread overcharge and impact.

TABLE 13: DR. HAIDER'S EXHIBIT D-13 WITH NET PURCHASER SPENDING—NO AFTER PERIOD VARIATION

	Alleged Conduct Period January 2009 - June 2018	Alleged Conduct Period January 2009 - June 2018
	Count of Direct Purchasers	Percentage of Direct Purchasers' Net Spending
	[a]	[b]
Positive and Statistically Significant[2]	**626**	**99.96%**
Positive and Not Statistically Significant	5	0.03%
Negative and Statistically Significant	1	0.00%
Negative and Not Statistically Significant	2	0.01%
Total Number of Top Direct Purchasers with No Positive Statistically Significant Overcharge	8	0.04%
Not Estimated[3]	1	
Top Estimated Direct Purchasers	**634**	**100%**

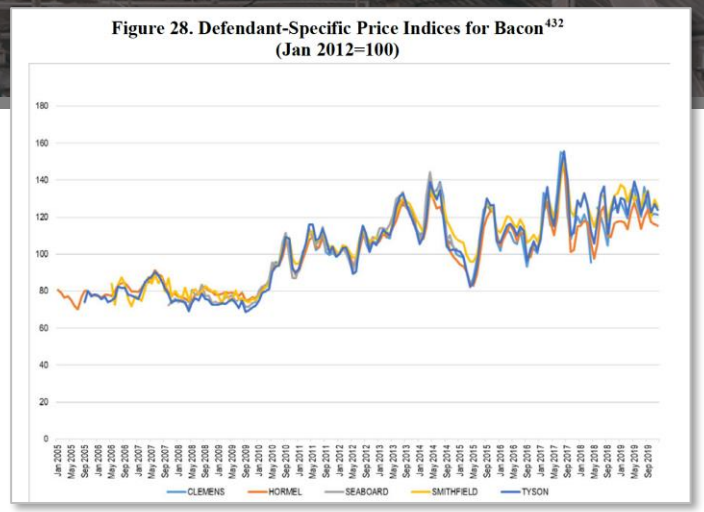
Notes:
1. Top Direct Purchasers are those with at least 50 observations in the proposed class period and 50 observations in the benchmark period.
2. Statistical significance is reported at the 5% significance level.
3. This is when a coefficient is not estimated for the alleged conduct period, the proposed class period, the early conduct period or the post-class period.

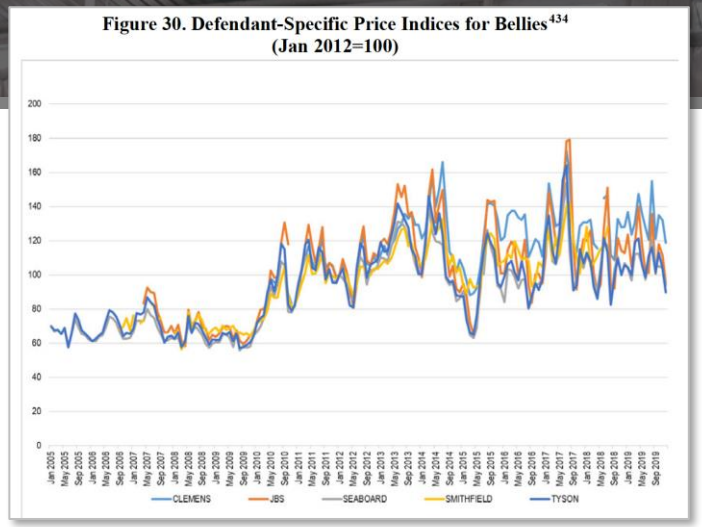
Source: Dr. Haider's Exhibit D-13.

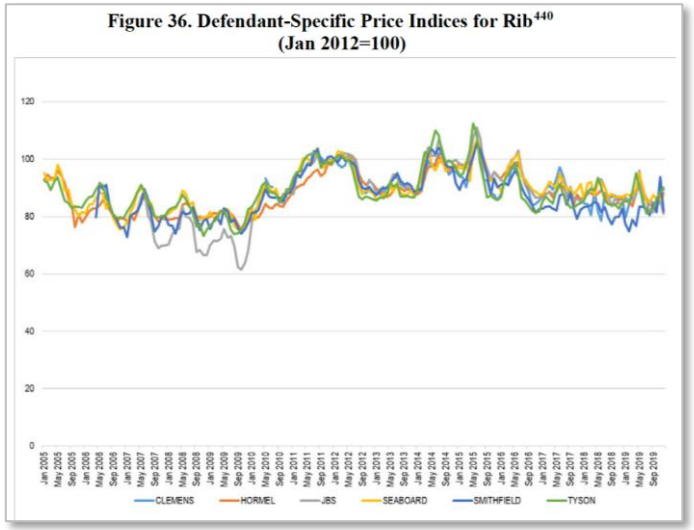
Singer Reply Table 13

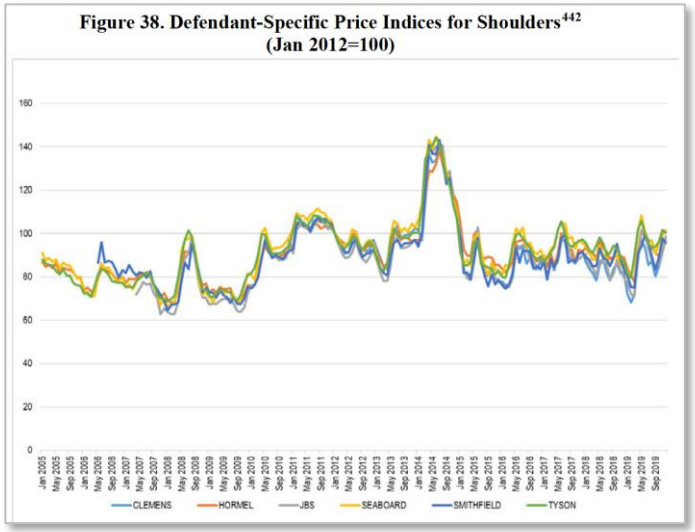
Method Four of Showing Common Impact: **Correlation Analysis**

Correlation across Defendants ensures that no direct purchaser could avoid impact.









Mangum Reply ¶ 101

Method Five of Showing Common Impact: **Agri Stats**

Agri Stats is the glue that holds the classes together, that the Supreme Court searched for in *Dukes*.

APPENDIX TABLE 1: DEFENDANTS AGRI STATS PARTICIPATION 2008-2018

Year	Clemens (Hatfield)			Hormel (PFFJ until March 2017)			JBS (Cargill, Pilgrim, Swift)			Seaboard (Seaboard Triumph Foods)			Smithfield (Farmland, John Morrell, Murphy-Brown, PFFJ from March 2017)			Triumph (Christensen Farms)			Tyson		
	Live	Plant	Sales	Live	Plant	Sales	Live	Plant	Sales	Live	Plant	Sales	Live	Plant	Sales	Live	Plant	Sales	Live	Plant	Sales
2008	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y
2009	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2010	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2011	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2012	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2013	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2014	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2015	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2016	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2017	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
2018	N	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y

Source: Agri Stats fee records. *See* AGSTAT-P-0003457363 (2008); AGSTAT-P-0003457366 (2009); AGSTAT-P-0003457367 (2010); AGSTAT-P-0003457368 (2011); AGSTAT-P-0003457369 (2012); AGSTAT-P-0003457370 (2013); AGSTAT-P-0003457371 (2014); AGSTAT-P-0003457372 (2015); AGSTAT-P-0003457373 (2016); AGSTAT-P-0003457364 (2017); AGSTAT-P-0003457365 (2018)

Singer Appendix Table 1.

Method Five of Showing Common Impact: **Agri Stats**

Agri Stats enabled them to see "opportunities" to increase price relative to their competitors.

03/05/09, 09:51:50-EE01-SWWS-AUDIT01-AUDIT01

Mar 5, 2009 - 09:51 — MAJOR CATEGORY SUMMARY REPORT FOR TOTAL COMPANY — Page: W.3-1
Week: 8/09 Ending: 02/21/09 — H206 - SEABOARD - SALES — Period: Week 8/09, Ending 02/21/09

LINE	(a) MAJOR CATEGORY GROUPS USING COMPANY PRICES VERSUS NATIONAL PRICE WITH COMPANY PRODUCT MIX	(b) (c.1) [PRICE] RANK	(c.1) VAR	(c.2) COMP MIX WITH CO PRICE	(b.3) NAT'L PRICE	(b.4) IMPACT FOR PRICE TOTAL VALUE	(b.5) PRICE CONT'B	(c) (c.1) [MIX] RANK	(c.1) VAR	(c.2) NAT'L PRICE WITH CO MIX	(c.3) NAT'L MIX	(c.4) IMPACT FOR MIX TOTAL VALUE	(c.5) MIX CONT'B	(d) TOTAL SALES POUNDS AND PERCENTS COMPANY POUNDS	(d.1) CO % TOT	(d.2) NAT'L LBS FOR COMPANY MIX	(d.3) ALL NATIONAL POUNDS	(d.4) NAT % TOT	(e) VAR COMP % VS NAT
1 CARCASS																			
1.01	CARCASS	-	-	-	-	-	-	-	-	-	63.52	-	-	-	-	-	228,142	100.00	-100.00
1.t	TOTAL CARCASS	-	-	-	-	-	-	-	-	-	63.52	-	-	-	-	-	228,142	-	-
2 BONE-IN HAMS																			
2.01	WHOLE BONE-IN HAMS	6-13	-0.19	43.42	43.61	-6,942	-0.03	9-13	-0.38	43.61	43.99	-13,856	-0.06	3,642,954	95.61	15,492,357	21,451,710	80.05	15.55
2.02	WHOLE SKINLESS HAMS	-	-	-	-	-	-	-	-	-	53.43	-	-	-	-	-	3,215,466	12.00	-12.00
2.03	SEMI-BONELESS HAM	-	-	-	-	-	-	-	-	-	68.30	-	-	-	-	-	1,077,032	4.02	-4.02
2.04	PLANK-OFF HAM	-	-	-	-	-	-	-	-	-	51.45	-	-	-	-	-	540,940	2.02	-2.02
2.05	SHORT SHANK HAM	-	-	-	-	-	-	-	-	-	59.62	-	-	-	-	-	213,237	0.80	-0.80
																		0.72	3.67
																		0.39	-0.39
																		-	-
																		4.83	11.72

03/05/09, 09:51:50-EE01-SWWS-AUDIT01-AUDIT01

Mar 5, 2009 - 09:51 — MAJOR CATEGORY SALES DETAIL REPORT — Page: W.4-1
Week: 8/09 Ending: 02/21/09 — H206 - SEABOARD - SALES — Period: Week 8/09, Ending 02/21/09

LINE	(a) PRODUCT CODE	(b) AGRI STATS/COMPANY PRODUCT DESCRIPTION	(c) COMPANY POUNDS	(c.1) COMPANY MIX %	(d) (d.1) (d.2) CO PRICE DETAIL INV PRICE	FREIGHT COST	SALES COST	(e) COMPANY NET PRICE	(f) (f.1) (f.2) NAT'L PRICE DETAIL INV PRICE	FREIGHT COST	SALES COST	(g) NAT'L NET PRICE	(g.1) NAT'L TOP 25%	(h) (h.1) (h.2) VARIANCE TO NAT'L NAT'L RANK	NAT'L VAR	TOP 25 VAR	(i) (i.1) ECONOMIC IMPACT DOLLARS VAR NAT'L	VAR TOP 25
1	40017#COM	HAM BONE-IN, 17 - 20 LBS	20,292	-	51.38	5.39	-	45.99	48.64	3.72	-	44.91	47.65	3-11	1.08	-1.66	218	-338
1.1	11210	B/I SELECT HAM 20/IN CB SH	20,292	100.00	51.38	5.39	-	45.99	48.64	3.72	-	44.91	47.65	3-11	1.08	-1.66	218	-338
2	40017#VAC	HAM BONE-IN, 17 - 20 LBS, VACUUM BAG	1,853	-	85.74	6.12	4.03	75.59	71.21	5.45	0.41	65.35	70.34	2-9	10.24	5.25	190	97
2.1	12226	B/I SELECT HAM 17/20 S&S VP	1,853	100.00	85.74	6.12	4.03	75.59	71.21	5.45	0.41	65.35	70.34	2-9	10.24	5.25	190	97
3	40020#COM	HAM BONE-IN, 20 - 23 LBS	454,765	-	47.56	3.25	-	44.31	48.72	2.80	0.00	45.92	50.00	7-12	-1.62	-5.69	-7,348	-25,881
3.1	11410	B/I SELECT HAM 20/23 CB SH	454,765	100.00	47.56	3.25	-	44.31	48.72	2.80	0.00	45.92	50.00	7-12	-1.62	-5.69	-7,348	-25,881
4	40020#VAC	HAM BONE-IN, 20 - 23 LBS, VACUUM BAG	1,789	-	79.05	7.52	0.54	71.00	72.03	5.72	0.13	66.18	71.91	2-5	4.82	-0.91	86	-16
4.1	12426	B/I SELECT HAM 20/23 S&S VP	1,789	100.00	79.05	7.52	0.54	71.00	72.03	5.72	0.13	66.18	71.91	2-5	4.82	-0.91	86	-16
5	40023#COM	HAM BONE-IN, 23 - 27 LBS	1,903,347	-	45.76	2.49	0.00	43.27	45.26	2.15	0.01	43.10	45.15	6-11	0.17	-1.88	3,192	-35,730
5.1	11610	B/I SELECT HAM 23/27 CB SH	1,903,347	100.00	45.76	2.49	0.00	43.27	45.26	2.15	0.01	43.10	45.15	6-11	0.17	-1.88	3,192	-35,730
6	40023#VAC	HAM BONE-IN, 23 - 27 LBS, VACUUM BAG	7,199	-	76.54	5.30	0.08	71.16	65.56	4.11	2.64	58.81	67.03	1-6	12.35	4.13	889	299
6.1	12626	B/I SELECT HAM 23/25 S&S VP	7,199	100.00	76.54	5.30	0.08	71.16	65.56	4.11	2.64	58.81	67.03	1-6	12.35	4.13	889	299
7	400-27COM	HAM BONE-IN, > 27 LBS	1,253,709	-	44.92	1.88	-	43.03	45.57	2.21	-	43.37	45.22	6-8	-0.33	-2.18	-4,170	-27,362
7.1	11810	B/I SELECT HAM 27/UP CB SH	1,253,709	100.00	44.92	1.88	-	43.03	45.57	2.21	-	43.37	45.22	6-8	-0.33	-2.18	-4,170	-27,362
8	2.01 - Co. Total	WHOLE BONE-IN HAMS	3,642,954	-	45.83	2.40	0.00	43.42	45.89	2.27	0.01	43.61	45.86	7-13	-0.19	-2.44	-6,943	-68,953
9	2.01 - Other Mix	Other Ratios Within Co Mix	-	-	-	-	-	-	45.57	2.21	-	43.37	-	-	-	-	-	-

Scarlett Decl., Ex. 9

Method Five of Showing Common Impact: **Agri Stats**

Competitors deanonymized the reports, and it allowed them to see the operating profits of their competitors.

STORM LAKE WAS 2nd for September '09 on IOE 'and' with hogcost neutralized

	Seaboard			Tarheel			Clinton			Triumph			IPC		
	Live wt 269.15	Export In % 32.9%	loin price 211.69	Live wt 258.96	Export In % 19.4%	loin price 208.07	Live wt 255.53	Export In % 18.8%	loin price	Live wt 277.72	Export In % 14.1%	loin price 217.72	Live wt 262.41	Export In % 50.5%	loin price 229.33
Ham	24.15%	$ 62.09	$ 14.99	23.96%	$ 64.71	$ 15.50	24.34%	$ 64.01	$ 15.58	24.33%	$ 57.30	$ 13.94	22.66%	$ 59.30	$ 13.44
Loin	23.91%	$ 105.43	$ 25.21	24.34%	$ 101.04	$ 24.59	23.41%	$ 107.36	$ 25.13	23.56%	$ 97.82	$ 23.05	24.91%	$ 97.04	$ 24.17
Picnic	11.49%	$ 42.97	$ 4.94	11.69%	$ 47.76	$ 5.58	11.26%	$ 45.99	$ 5.18	9.01%	$ 55.11	$ 4.97	11.94%	$ 47.52	$ 5.67
Butt	9.15%	$ 75.11	$ 6.87	8.31%	$ 69.89	$ 5.81	8.72%	$ 75.24	$ 6.56	8.98%	$ 72.38	$ 6.50	9.67%	$ 71.62	$ 6.93
Belly	14.04%	$ 78.96	$ 11.09	15.46%	$ 74.25	$ 11.48	15.64%	$ 58.04	$ 9.08	15.45%	$ 77.46	$ 11.97	12.98%	$ 79.72	$ 10.35
Rib	4.96%	$ 107.42	$ 5.33	4.63%	$ 97.47	$ 4.51	4.75%	$ 95.94	$ 4.56	5.20%	$ 100.16	$ 5.21	4.80%	$ 96.90	$ 4.65
Misc	4.82%	$ 30.19	$ 1.46	4.63%	$ 41.53	$ 1.92	4.44%	$ 41.73	$ 1.85	4.75%	$ 29.70	$ 1.41	5.19%	$ 30.00	$ 1.56
Fat/fatback	6.25%	$ 50.69	$ 3.17	4.30%	$ 32.86	$ 1.41	4.01%	$ 35.66	$ 1.43	4.47%	$ 26.20	$ 1.17	5.93%	$ 24.04	$ 1.43
Total Rtn	98.77%		$ 73.05	97.32%		$ 70.82	96.57%		$ 69.37	95.75%		$ 68.21	98.08%		$ 68.19
Primal yld / trim	87.70%			88.39%			88.12%			86.53%			86.96%		
Dressed yld	75.06%			75.37%			75.57%			76.50%			75.15%		
Hog cost			$ 53.35			$ 50.16			$ 52.85			$ 52.09			$ 53.64
Plant costs			$ 7.21			$ 7.41			$ 7.71			$ 6.20			$ 5.65
IOE/rank		3rd	$ 13.32		1st	$ 13.72		6th	$ 11.59		4th	$ 12.50		8th	$ 8.01
Hog cost neutral		1st	$ 66.67		7th	$ 63.88		4th	$ 64.44		3rd	$ 64.59		9th	$ 61.65

	Beardstown			JBS			Hatfield			Monmouth			PSF		
	Live wt 266.33	Export In % 0.0%	loin price	Live wt 265.1	Export In % 5.0%	loin price	Live wt 266	Export In % 6.4%	loin price	Live wt 268.65	Export In % 0.0%	loin price	Live wt 272.19	Export In % 31.2%	loin price 204.06
Ham	24.02%	$ 63.07	$ 15.15	23.21%	$ 62.20	$ 14.44	24.72%	$ 60.89	$ 15.05	24.14%	$ 58.32	$ 14.08	23.89%	$ 57.38	$ 13.71
Loin	23.69%	$ 99.59	$ 23.59	21.19%	$ 99.98	$ 21.19	22.62%	$ 103.67	$ 23.45	22.46%	$ 95.62	$ 21.48	21.64%	$ 98.84	$ 21.39
Picnic	11.57%	$ 42.40	$ 4.91	11.23%	$ 55.31	$ 6.21	10.35%	$ 46.48	$ 4.81	12.20%	$ 43.75	$ 5.34	10.22%	$ 50.08	$ 5.12
Butt	8.99%	$ 62.61	$ 5.63	8.05%	$ 77.16	$ 6.21	9.03%	$ 70.93	$ 6.40	8.54%	$ 70.35	$ 6.01	8.77%	$ 72.24	$ 6.34
Belly	17.17%	$ 61.59	$ 10.58	15.15%	$ 75.66	$ 11.46	16.48%	$ 64.30	$ 10.60	16.07%	$ 64.84	$ 10.42	14.47%	$ 70.85	$ 10.25

PART II

DEFENDANTS' CRITICISMS OF PLAINTIFFS' REGRESSION MODELS

Defendant Sleight of Hand #1:
Reframe the Conspiracy to be One About Hogs (Not Pork)

> As a matter of economics, control of the hog market is not necessary for a cartel to function in the pork market.

Singer Reply ¶ 33; Mangum Reply ¶ 17; Williams Reply ¶ 52.

Defendant Sleight of Hand #1:
Reframe the Conspiracy to be One About Hogs (Not Pork)

Defendants own 34% of all hogs and 63% are sold under marketing contracts.

- Smithfield roughly 50% vertically integrated.
- Triumph obtains 80% of hogs from member growers.
- 70-80% of hogs slaughtered by Seaboard are raised on own farms.
- JBS – purchases hogs through long-term supply contracts.
- Tyson has 96% of hogs under long-term relationships.

Scarlett Ex. 152-158

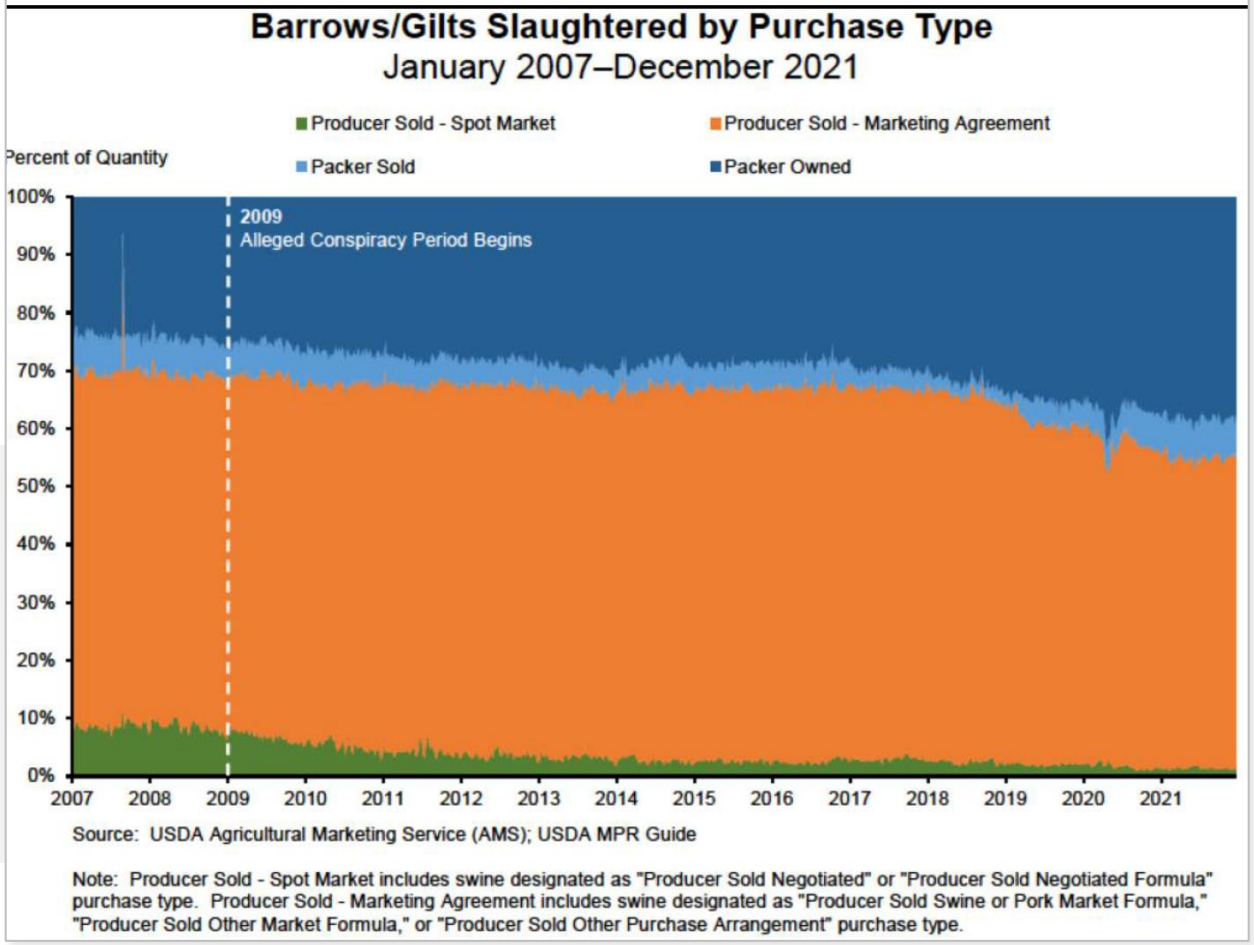
Defendant Sleight of Hand #1:
Reframe the Conspiracy to be One About Hogs (Not Pork)

Defendants' expert acknowledges that over 90% of hogs are controlled by the Defendants.

LEGEND:

- Producer Sold – Spot Market
- Packer Sold
- Producer Sold – Marketing Agreement
- Packer Owned

FIGURE 1: DR. MINTERT'S EXHIBIT 2
BARROWS/GILTS SLAUGHTERED BY PURCHASE TYPE



Mintert Ex. 2 / Singer Reply ¶¶ 43-44.

Defendant Sleight of Hand #1:
Reframe the Conspiracy to be One About Hogs (Not Pork)

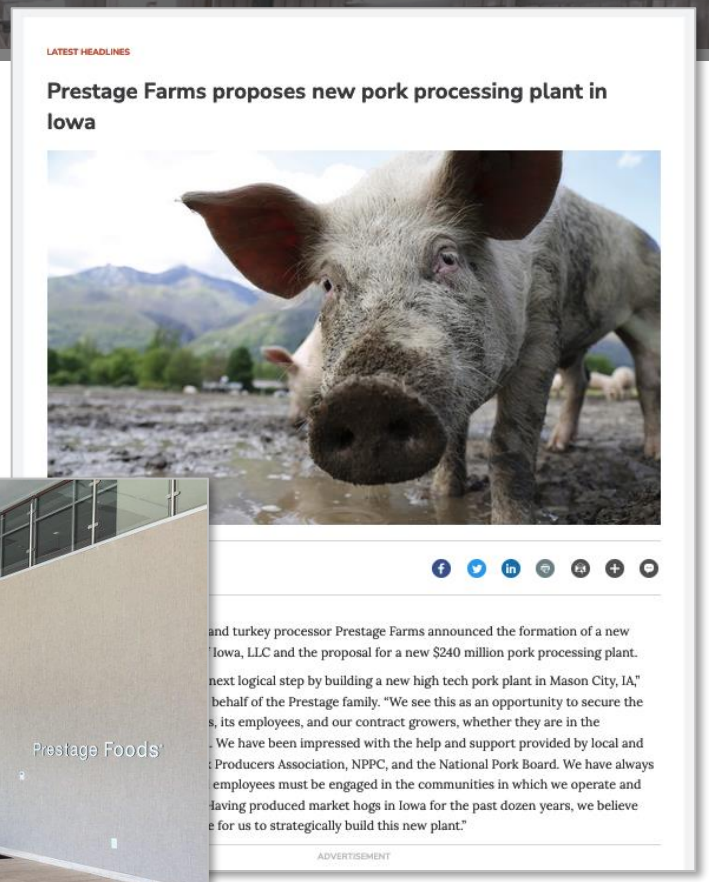
The contemporaneous record shows that hog farmers recognized the packers had leverage to manipulate the supply of hogs.

- While packers do not "dictate []per se" how many hogs farmers can grow, farmers "are very cautious and slow not to add production until we know for sure there's a marketplace for those hogs."
- Farmer in 2015: "Because supply is so close to what slaughter capacity is, the Packer can control their margins very effectively. . . . ***If they choose not to kill a lot of Saturdays because they want to maintain a high margin per head, they have the luxury of doing that***!"
- Independent producers: "I've got a big investment in my farms and someone else is making the money. ***There is no real fundamental market fo[r] hogs, no bidding process. I'm squeezed out of the market***."
- Hog Farmer: "Besides the lack of investment in slaughter capacity, the packers have demonstrated a total lack of competitiveness. As a supplier of negotiated pigs it was very transparent."

Scarlett Exs. 164, 177, 180, 293

Defendant Sleight of Hand #1:
Reframe the Conspiracy to be One About Hogs (Not Pork)

One hog farmer decided that to increase competition, it would build its own $240 million facility.


LATEST HEADLINES

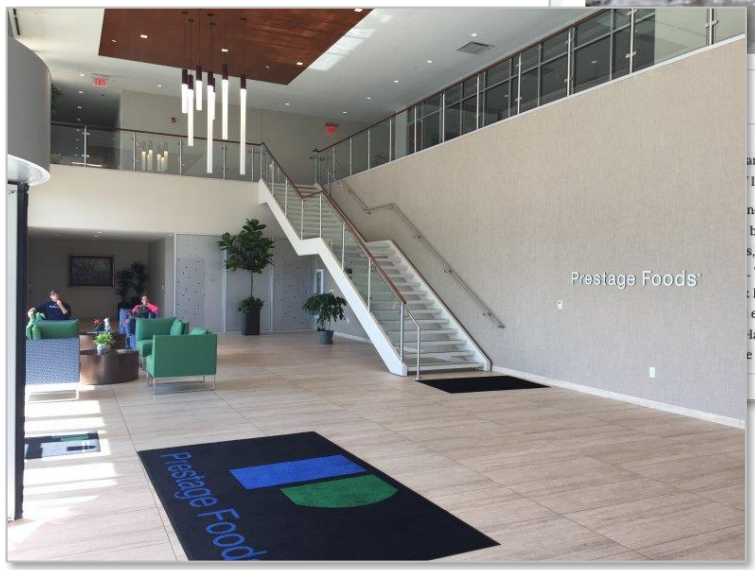
Prestage Farms proposes new pork processing plant in Iowa

and turkey processor Prestage Farms announced the formation of a new Iowa, LLC and the proposal for a new $240 million pork processing plant.

next logical step by building a new high tech pork plant in Mason City, IA," behalf of the Prestage family. "We see this as an opportunity to secure the s, its employees, and our contract growers, whether they are in the . We have been impressed with the help and support provided by local and Producers Association, NPPC, and the National Pork Board. We have always employees must be engaged in the communities in which we operate and laving produced market hogs in Iowa for the past dozen years, we believe for us to strategically build this new plant."

ADVERTISEMENT

"[M]ade the decision after seeing that the consolidation of the pork packing industry [] had decreased competition for live hogs and helped depress prices to hog producers. The company says it sees the need to construct this facility increasing competition and maximizing the value of all hogs produced in the United States."



Scarlett Ex. 170

Defendant Sleight of Hand #2: **Plaintiffs have not measured "lawful" versus "unlawful" conduct (supply, exports and capacity)**

1. Plaintiffs measured pork price *but-for* the conspiracy.
2. Plaintiffs measured pork supply *but-for* the conspiracy.
3. Defendants suggest (wrongly) Plaintiffs must *decompose* supply.
4. The law recognizes financial injury.
5. Common to the class.

Table 3 Production Regression Results

Independent variable	Coefficient	Robust Std. Err.
Indicator of the damages period (Jan. 2009 – Jun. 2018)	-0.073	0.021***
Percentage production effect in Jan. 2009 – Nov. 2011	-7.0%	
Indicator of the post period (Jul. 2018 – Dec. 2020)	-0.009	0.024
Indicator of swine flu	-0.026	0.018
Indicator of COVID	-0.121	0.147
Ln(Population)	1.342	1.121
Ln(Disposable personal income)	-0.163	0.360
Ln(Chicken price)	0.651	0.173***
Ln(Beef price)	-0.171	0.098*
Ln(Piglet loss rate)	-0.050	0.019**
Ln(Cost of hog)	-0.195	0.025***
Ln(Plant cost for pork processing (excluding condiment cost)	-0.184	0.205
Ln(Salt price)	0.288	0.072***
Number of Observations	64	
Adjusted R-Squared	0.90	
Period	2005Q1-2020:Q4	

Notes:
Estimates on quarterly fixed effect and the constant term are omitted in this table.
***Significant at the 1 percent level; **Significant at the 5 percent level; * Significant at the 10 percent level.

Williams Table 3

Defendant Sleight of Hand #3:
Remove 2008 Data Without Justification

Removing 2008 removes 33% of the benchmark data, removing statistical precision.

Regression Control Variables	Dr. Singer	Dr. Mangum	Dr. Williams	Controls For:	Dr. Haider's Alleged Missing Factors
Competing Proteins	✓	✓	✓	The relative prices of pork substitutes.	"National Economic Shocks"
GDP	✓	✓	✓	Consumer demand, labor productivity, standard of living, national economic shocks.	"National Economic Shocks", "2008 anomalous year", "trade"
Hog cost	✓	✓	✓	Corn, soy, other feed; farm labor, farm capital, interest rates, transportation, fuel, vet costs, etc.	"Cost of acquiring live hogs", "2008 anomalous year", "Circovirus vaccine"
Plant costs	✓	✓	✓	Plant labor, supervision, packaging, plant supplies, maintenance, ice, utilities, depreciation, regulatory costs,	"National Economic Shocks" "2008 anomalous year"
Swine Flu	✓	✓	✓	H1N1 shock in consumer demand.	
Piglet Loss Rate	✓	✓	✓	Piglet morality rates, Circovirus vaccine.	"2008 anomalous year", "Circovirus vaccine"
Seasonality	✓	✓	✓	Seasonal prices on cuts.	
Covid	✓	✓	✓	COVID-19 economy shocks.	
Bacon Ingredient Index	✓	X	✓	Bacon-specific ingredient costs (salt and spices).	
Pork Recalls	✓	X	X	Consumer demand following recalls.	
CPI	X	✓	✓	USD inflation.	
Population	X	X	✓	Long run consumer demand.	
Trend	✓	X	X	Long run trends: (Technology, productivity, export demand, population, inflation.)	
Processor Fixed Effects	✓	✓	✓	Individual Defendant characteristics.	
Product Fixed Effects	✓	✓	✓	Primal cut pricing differences.	
Customer ID Fixed Effects	✓	✓	✓	Individual Direct Purchaser characteristics.	
Customer Type Fixed Effects	✓	X	✓	Direct Purchaser category (distributor, retail, etc.).	

Singer Reply Table 7; Mangum Reply Figure 20.

Defendant Sleight of Hand #4: **Slicing and Dicing Data**

Even breaking the models apart, Plaintiffs can demonstrate an overcharge for every year of the conduct and damages period.

TABLE 8: DEFENDANTS' SALES REGRESSIONS, INTERACTED CONDUCT BY YEAR

	Dependent Variable: *ln(Wholesale Price Per Pound)*	
Explanatory Variable	**Inc. Post Class**	**Ex. Post Class**
Conduct — 2009	**-0.023**	**0.011**
Conduct — 2010	**0.166**	**0.22**
Conduct — 2011	**0.257**	**0.313**
Conduct — 2012	**0.211**	**0.285**
Conduct — 2013	**0.242**	**0.342**
Conduct — 2014	**0.335**	**0.441**
Conduct — 2015	**0.198**	**0.372**
Conduct — 2016	**0.22**	**0.422**
Conduct — 2017	**0.266**	**0.478**
Conduct — 2018	**0.249**	**0.478**
Post Class Period	0.234	--
ln(Total Cost Per 270lb Pig)	0.007	0.118
ln(Plant Cost Per Lb)	0.256	0.078
Piglet Loss Rate (6 Month)	0.002	0.009
Covid Flag	0.042	--
Bacon Ingredient Index	0.004	0.004
Swine Flu Flag	-0.043	-0.049
ln(Beef-Chicken Index)	0.257	0.044
Pork Recalls Active	-0.003	-0.003
ln(Real GDP Per Capita)	0.055	0.051
Trend	-0.862	-1.262
Constant	-1.063	-0.696
All P-Values Below 0.01?	Yes	Yes
Cut-By-Month Seasonality?	Yes	Yes
Additional Fixed Effects:	Processor - Product - Customer ID	Processor - Product - Customer ID
Number of Additional FE:	215,593	184,712
Observations	3,885,498	3,193,106
R-Squared	93.1%	93.3%

Notes: The first bolded rows measure the effect of the Conduct; non-bolded rows are control variables. The p-values indicate the statistical significance of each coefficient estimate. *See* Wooldridge at 776-777.

Singer Reply Table 8

Defendant Sleight of Hand #5: **Changing Variables**

The class experts correctly used the cost of hogs variable, and not the price of hogs (which suffers simultaneity bias).

FIGURE 4: DR. SINGER'S COST OF HOGS MODEL

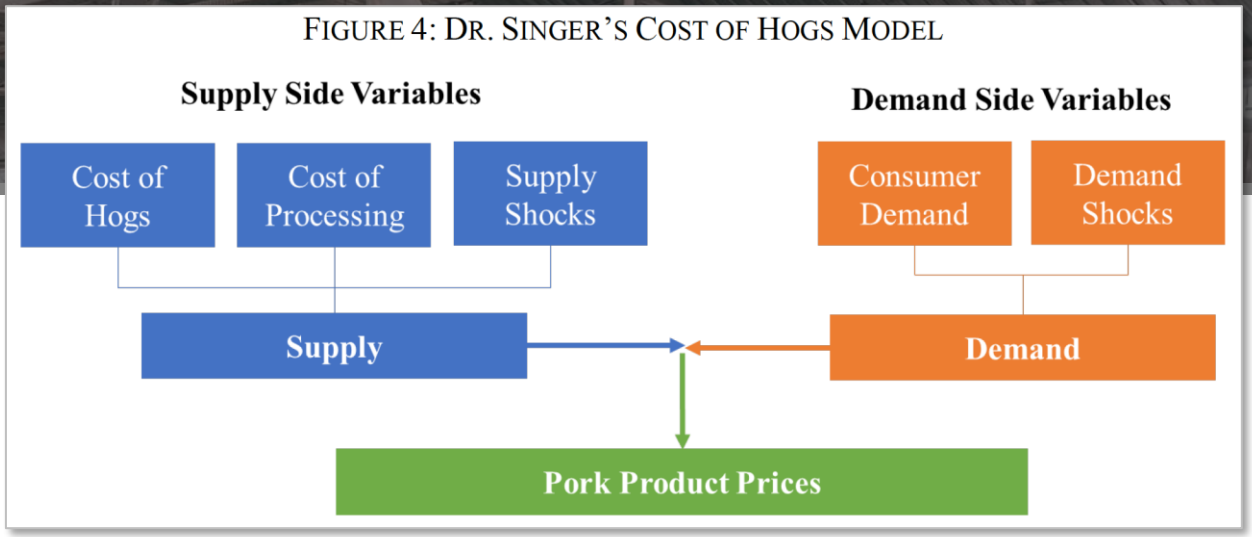
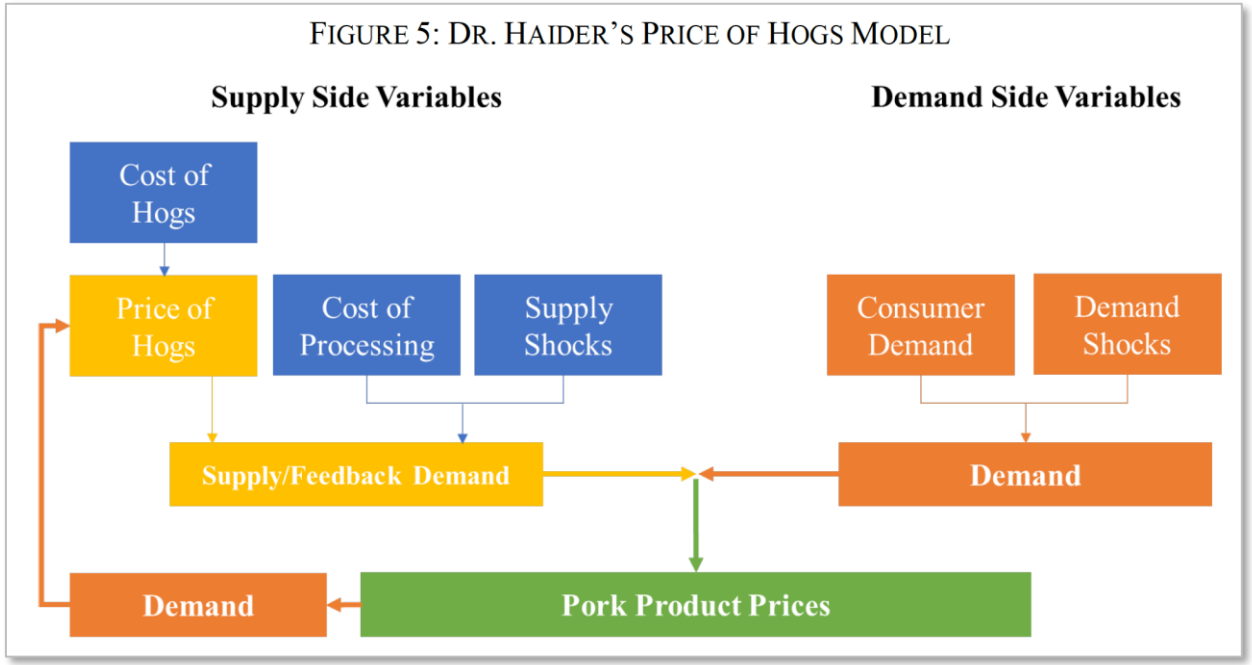


FIGURE 5: DR. HAIDER'S PRICE OF HOGS MODEL



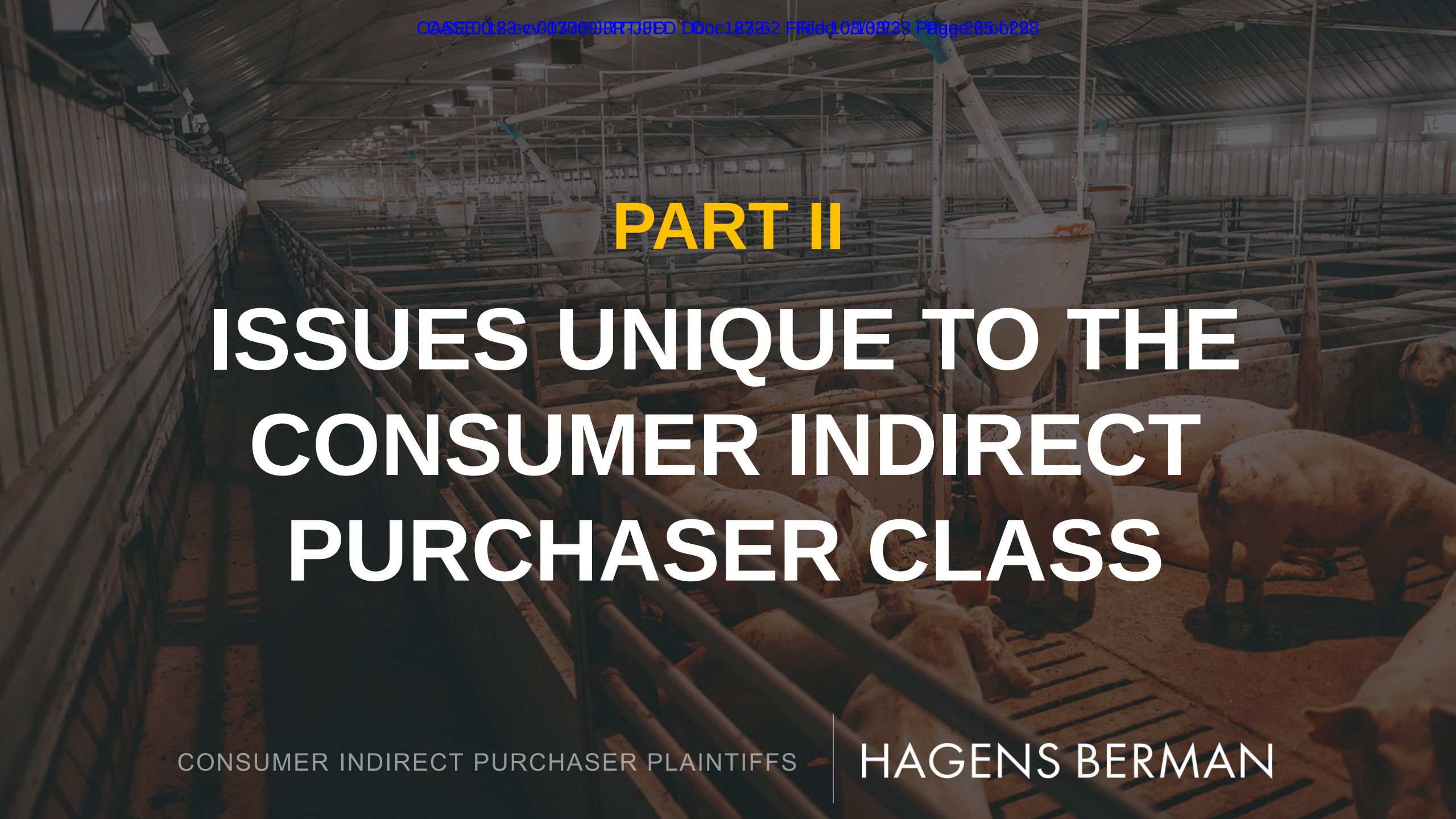
Singer Reply ¶¶ 88-89, 91; Mangum Reply ¶¶ 141-46; Williams Reply ¶¶ 113-16

Defendant Sleight of Hand #6:
An Industry Expert (Dr. Mintert) Who Did Not Read or Access Any Documents in this Case

Dr. Mintert cannot opine that factors ***other than*** the conspiracy account for the overcharge when he failed to look at data or documents specific to this case.

- **Dr. Mintert is not**: an expert in antitrust cases; an expert in cartels; an econometrician.
- **Dr. Mintert did not**: review the transactional data produced by defendants; evaluate the regression models performed by any plaintiffs' expert (on overcharge, production levels or pass-through).
- **Dr. Mintert made no inquiry into Agri Stats**: He did not look at even one Agri Stats report because he "didn't see any reason why I need to access the Agri Stats reports."
  - He didn't inquire into how "any of the individual firms exactly … were using" Agri Stats.
  - He testified: "I was not aware of that [the introduction of the Agri Stats export sales report in 2013] because I haven't examined anything that Agri Stats has done in any detail."
  - He said: "I did not examine the Agri Stats reports in any way. So the answer is no."

Scarlett Ex. 161



PART II

ISSUES UNIQUE TO THE CONSUMER INDIRECT PURCHASER CLASS

Unique Consumer Class Issues

Consumer IPPs have demonstrated pass-through to the end-purchasers

Pass-through is commonplace in commodity markets.

- Smithfield: When “production is reduced and costs rise, meat prices will increase” and “these cost increases eventually will be passed to the American consumer.”
- Steve Meyer – industry economist: processors pass on any increase in the “price of pigs” to consumers who “pay all costs in the long run.”
- Retailers testified that they seek to maintain a gross margin of 30-40%.
- No price points have been identified in pork sales.

Scarlett Exs. 48, 128, 184, 281, 283; Singer Figure 6, ¶¶ 41, 177.

Unique Consumer Class Issues

Consumer IPPs have measured pass-through, utilizing data representing 50 percent of the retail market and 43 percent of distributors.

APPENDIX 3: PASS-THROUGH ANALYSIS OF RETAIL STORES INCLUDING WALMART AND SAM'S CLUB

Entity	*Linear-Levels Model* Pass-Through	*Linear-Levels Model* R-Squared	*Linear-Log Model* Pass-Through	*Linear-Log Model* Price / Cost Ratio	*Linear-Log Model* Elasticity	*Linear-Log Model* R-Squared	Share of Defendant Retail Sales (2018)	Weighting (2018 Own-Data Sales)
7-Eleven	85%	0.57	84%	1.60	0.52	0.58	--	0.04%
Aldi	103%	0.94	109%	1.33	0.82	0.94	2.1%	16.09%
Amazon Fresh	129%	0.94	128%	1.37	0.93	0.91	0.0%	0.71%
Big Y Foods	121%	0.92	128%	1.51	0.85	0.93	0.0%	0.12%
BJ Wholesale	113%	0.74	153%	1.65	0.93	0.80	0.0%	7.47%
Costco	107%	0.99	117%	1.35	0.87	0.94	8.7%	18.97%
CVS	100%	0.78	110%	1.35	0.81	0.81	--	0.07%
Dollar General	91%	0.28	157%	1.99	0.79	0.47	0.3%	3.13%
Family Dollar	97%	0.92	112%	1.32	0.85	0.95	--	0.54%
HE Butt Grocery	153%	0.90	138%	1.52	0.91	0.91	--	2.44%
Kroger	138%	0.88	137%	1.69	0.81	0.84	9.4%	0.53%
Meijer	116%	0.78	120%	1.60	0.75	0.75	1.5%	4.36%
Natural Grocers	163%	0.84	134%	1.31	1.02	0.94	--	0.35%
Target	110%	0.79	114%	1.50	0.76	0.75	0.4%	5.50%
Trader Joes	129%	0.92	126%	1.46	0.87	0.92	0.1%	5.41%
Wegmans	183%	0.73	159%	1.60	0.99	0.78	0.6%	2.50%
Walmart/Sam's Club	92%	0.08	109%	3.01	0.36	0.08	27.3%	31.74%
Weighted Average	**106.7%**	**0.62**	**119.3%**			**0.62**	**50.3%**	**100%**
Median	**113.0%**	**0.84**	**126.1%**			**0.84**		

Notes: Any third party with Sales in Defendants' Data or Share of Category Sales equal to "—" is not accounted for within the Defendants' data.
This could be due to (1) an inability to match the entity name with the customer name within the Defendants' data, or (2) the third party purchasing product from another vendor indirectly, rather than through the Defendants.
For weighting, Amazon Fresh uses 2020 data (2018 was not produced). Any third party with Sales in Defendants' Data equal to 0.0% has a negligible amount of direct purchases from Defendants.
Walmart's low R-Squared is in part due to the larger number of products in data. If product fixed effects are used (such as in Dr. Haider's pass-through analysis), the R-Squared is approximately 0.77.

Singer Reply App. 3; Singer Table 22 (Distributor pass-through)

Unique Consumer Class Issues

There is a less than 0.02% chance a class member was uninjured given that Defendants control 85% of the market, and households purchase pork 6.2 times per year.

TABLE 3: CHANCE OF NOT PURCHASING DEFENDANT PORK

[1]	[2]	[3] = [1]^[2]	[4]	[5] = [2]*[4]	[6] = [1]^[5]
Chance NOT Defendant	**Purchases Per Year**	**Chance to NOT Buy Defendant, One Year**	**Class Years**	**Class Purchases**	**Chance to NOT Buy Defendant, Over Class Period**
20%	5.3	0.020%	3.5	18.55	1.08E-13
20%	6.2	0.005%	3.5	21.7	6.80E-16
20%	6.7	0.002%	3.5	23.45	4.07E-17
20%	6.8	0.002%	3.5	23.8	2.31E-17

Singer Reply ¶¶ 18-19, Table 3